

**SPINALANX, A NEW GENUS AND TWO NEW SPECIES OF
PENTATOMINI FROM SOUTH AMERICA
(HEMIPTERA: PENTATOMIDAE)**

L. H. ROLSTON AND D. A. RIDER

Department of Entomology, Louisiana Agricultural Experiment Station,
Louisiana State University Agricultural Center, Baton Rouge, Louisiana 70803

Abstract.—The genus *Spinalanx* and two included species, *S. monstrabilis* and *S. corusca*, are described as new from South America. The genus is one of six genera of Pentatomini in the western hemisphere that do not have a median spine or tubercle at the base of the abdominal venter but do have the inferior surfaces, at least, of some or all femora armed. A key is provided for the separation of these genera.

Among the genera of Pentatomini that are characterized by the absence of a median spine or tubercle at the base of the abdominal venter, there are six in the western hemisphere that have at least the inferior surface of some or all pairs of femora armed. These six genera, one of them new, may be separated by the following key.

KEY TO GENERA

1. Ostiolar ruga on each side reaching about $\frac{3}{4}$ distance from mesial limit of ostiole to lateral margin of metapleuron *Seneticus* Rolston
- Ostiolar ruga on each side reaching about $\frac{3}{10}$ distance from mesial limit of ostiole to lateral margin of metapleuron 2
- 2(1). Only middle and hind femora armed, each bearing a single, preapical spine or tubercle on inferior surface (Fig. 1); females or both sexes brachypterous *Mathiolus* Distant
- Front femora, at least, variously armed on inferior surface with one or more pairs of large, preapical spines or tubercles, or with numerous, small, seta-bearing tubercles (Figs. 2, 3); hemelytra well developed 3
- 3(2). Width of scutellum at distal end of frena about $\frac{2}{3}$ or less of basal width; spines or tubercles on inferior femoral surfaces differing greatly in size, those nearest apices of femora largest (Fig. 2) 4
- Width of scutellum at distal end of frena about $\frac{1}{2}$ or more of basal width; at least inferior femoral surfaces armed with many, small, seta-bearing tubercles of approximately equal size (Fig. 3) 5
- 4(3). Interocular width $\frac{1}{2}$ width of head across eyes; rostrum reaching mesocoxae *Sibaria* Stål
- Interocular width $\frac{3}{5}$ width of head across eyes; rostrum reaching metacoxae *Ladeaschistus* Rolston
- 5(3). Each corium with impunctate bands paralleling R+M vein and clavical suture; posterior margins of basal plates entire, smooth *Agroecus* Dallas
- All of each corium punctate; posterior margins of basal plates tuberculate *Spinalanx*, new genus

Spinalanx, new genus

Type species. Spinalanx monstrabilis, new species.

Diagnosis. Third abdominal (second visible) sternite without mesial spine or tubercle. Ostiolar rugae auriculate. Femora armed with numerous, small, seta-bearing tubercles scattered on all but posterior surfaces. Width of scutellum at distal end of frena about $\frac{1}{5}$ of basal width. Each corium entirely punctate, without impunctate bands along veins and clavical suture. Anterolateral margins of pronotum denticulate (Figs. 4, 12). Area between posterior margin of pygophore and inferior ridge broad, nearly flat, unexcavated (Fig. 6). Basal plates irregularly convex but not tumid, their posterior margins tuberculate (Figs. 8, 9, 13, 14).

Description. Broadly ovate; slightly convex dorsally, strongly so ventrally. Dorsal surface of head moderately convex transversely; tylus slightly longer than juga. First of 5 segments in each antenna nearly reaching apex of head. Anterolateral margins of pronotum concave in dorsal view, denticulate (Figs. 4, 12). Scutellum broadly rounded apically, about $\frac{3}{5}$ as wide at distal end of frena as at base. All of each corium punctate, without impunctate bands along veins or clavical suture; hemelytral membranes fumose, with parallel venation. First rostral segment protruding little or not at all beyond bucculae, second segment reaching mesocoxae or nearly so, fourth segment extending to or slightly past metacoxae. Prosternum flat, mesosternum moderately carinate mesially, metasternum weakly concave. Ostiolar rugae auriculate; evaporative areas relatively small. Each femur armed on all but posterior surface with numerous, small, scattered, seta-bearing tubercles (Fig. 3). Tibiae sulcate. Tarsi 3-segmented. Third abdominal sternite without mesial spine or tubercle. Mesial trichobothrium of each pair lying within imaginary, curved band connecting spiracles on each side of abdomen.

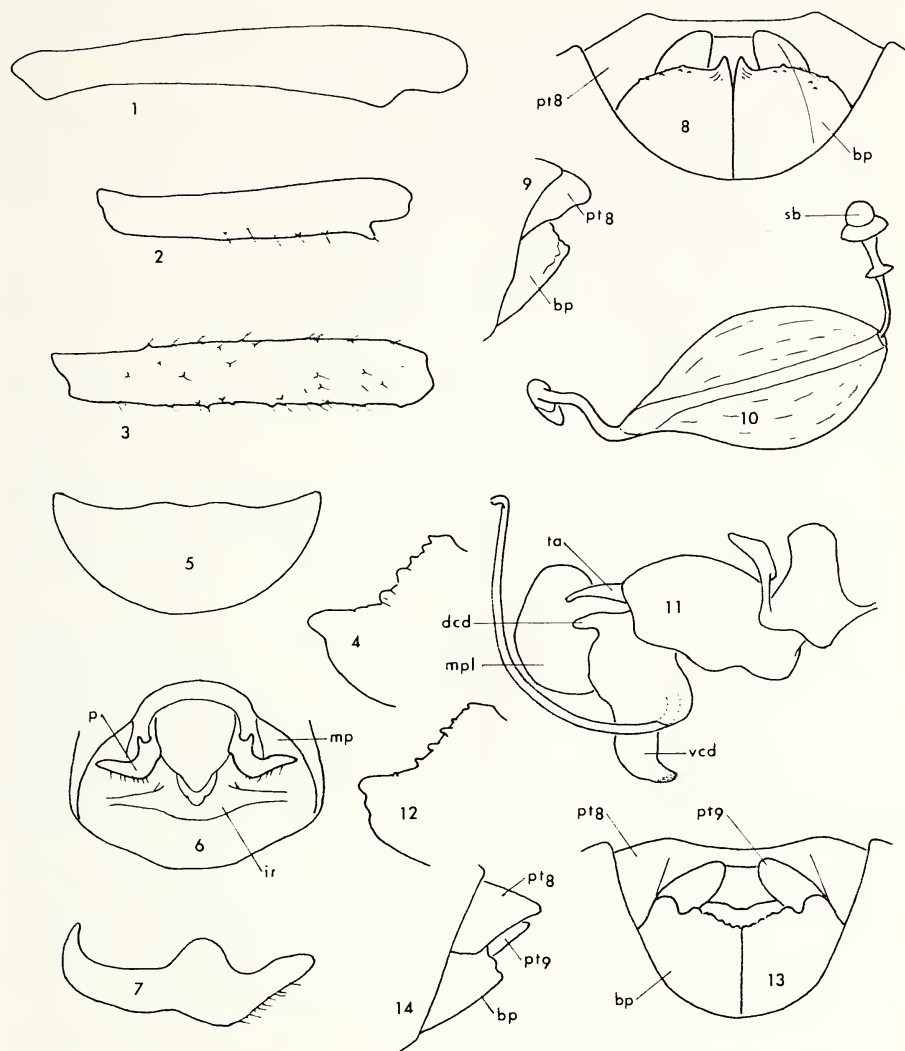
Area between posterior margin of pygophore and inferior ridge unexcavated, forming nearly flat border (Fig. 6). Membranous pad present on each lateral wall of genital cup. Parameres without basal cup (Fig. 7). Thecal appendages present (Fig. 11). Basal plates weakly convex, their posterior margins tuberculate (Figs. 8, 9, 13, 14).

Comments. This genus appears to be related most closely to *Agroecus* Dallas, from which it differs conspicuously in having rather uniformly punctate coria, weakly convex basal plates that are tuberculate along the posterior margins, membranous pads on the lateral walls of the genital cup, and parameres without a pronounced basal cup.

Spinalanx monstrabilis, new species

Figs. 3-11

Description. Dorsum dark brown to fuscous, becoming fuscous to black along anterolateral pronotal borders and on humeri; apices of humeral angles sometimes pale. Dorsal punctation dense, strong, black, slightly weaker and closer on head, anterior pronotal margin and humeri than elsewhere; many punctures on scutellum arranged in short, irregular, transverse lines; interstices on pronotal and scutellar disks unevenly rugose, some subtuberculate or subcarinate, especially on pronotum. Jugal margins subparallel for middle third of distance from eyes to apex of head; anteocular margins weakly convex; tylus projecting slightly beyond juga. Antennae light to dark brown, basal fourth of each terminal segment pale. Anterolateral pronotal



Figs. 1-14. 1-3. Front femur, anterior view. 1. *Mathiolus generatus* Distant. 2. *Ladeaschistus armipes* (Stål). 3. *Spinalanx monstrabilis*. 3-11. *Spinalanx monstrabilis*. 3. Femur. 4. Humerus and anterolateral pronotal margin. 5. Pygophore, caudal view. 6. Genital cup. 7. Paramere. 8. Genital plates, caudoventral view. 9. Genital plates, lateral view. 10. Spermatheca. 11. Theca and related structures. 12-14. *Spinalanx corusca*. 12. Humerus and anterolateral pronotal margin. 13. Genital plates, caudoventral view. 14. Genital plates, lateral view. Symbols: bp, basal plate; dcd, dorsolateral conjunctival diverticulum; ir, inferior ridge; mp, membranous pad; mpl, median penial lobe; p, paramere; pt8, paratergite 8; pt9, paratergite 9; sb, spermathecal bulb; ta, thecal appendage; vcd, ventrolateral conjunctival diverticulum.

margins concave in dorsal view, each with 5–8 stout denticles; humeral angles produced laterad, narrowly rounded; margin immediately caudad of each humeral angle concave (Fig. 4). Scutellum slightly wider at base than long.

Connexiva narrowly exposed, serrate; posterolateral angle of each segment and sometimes a marginal macule pale. Posterior margin of each corium diagonal, nearly straight between rounded mesial angle and costal margin; costal angle nearly right angular, lying above posterior half of penultimate segment of connexivum, sometimes reaching last connexival segment.

Venter light brown to yellowish brown. Punctuation fuscous to black, rather dense and uniform. Evaporative areas with small, fuscous punctures. Spiracular peritremes fuscous. Legs colorous with venter; numerous large, dark spots and macules scattered on femora and tibiae.

Broad, shallow depression in each basal plate paralleling posterior margin of last sternite; posterior margin concavely emarginate just laterad of acute posteromesial angle (Fig. 8); tubercles present on posterior margin and border laterad of emargination. Spermathecal bulb spheroid (Fig. 10).

Posterior margin of pygophore slightly sinuous from both caudal and caudoventral view (Fig. 5); pygophoral surface broadly and weakly carinate mesially. Parameres digitiform distally, expanded dorsally just distad of point of articulation (Fig. 7). Conjunctiva with dorsolateral pair and ventrolateral pair of diverticula (Fig. 11) median penial lobes laminar, large.

Measurements (mm, holotype in parentheses): Length from apex of head to apex of abdomen 8.04–9.30 (8.04). Length of head from apex to posterior margin of ocelli 1.99–2.26 (1.99), width across eyes 2.17–2.43 (2.17). Length of segments 1–5 of each antenna 0.52–0.61, 0.84–0.90, 0.92–1.13, 1.12–1.25, 1.21–1.40 (0.55, 0.88, 0.92, 1.14, 1.29). Length of segments 2–4 of rostrum 1.73–1.88, 0.59–0.77, 0.63–0.70 (1.88, 0.63, 0.63). Mesial length of pronotum 1.91–2.21 (1.91), width at humeri 5.36–6.15 (5.36). Scutellar length 3.13–3.75 (3.13), basal width 3.25–3.94 (3.39), width at distal end of frena 1.66–2.47 (2.10).

Types. Holotype: ♂ labeled "COLOMBIA: Putumayo: Sta. Rosa de Sucumbios, Kofan Indian Village, Rio San Miguel, 400 m. Sept. 5–9, 1971. B. Malkin"; deposited in American Museum of Natural History. Paratypes: 8♂♂, 7♀♀; labeled same as holotype (4♂♂, 2♀♀ AMNH); "COLOMBIA: Putumayo: Santa Rosa, Kofan Indian Village, Headwaters Rio S. Miguel, Oct. 2–15, 1970. P. Burchard, B. Malkin" (1♀, LHR); "Rio Negro near Villavicencio, Nov. 1, 1965. COLOMBIA, E. W. Schmidt-Mumm" (1♀ AMNH; 1♂, 1♀ DAR); "PERU: Dpto. Loreto, Quebrada Orán ca 5 km N Rio Amazonas, 85 km NE Iquitos, el. 110 m. VI-1984, L. J. Barkley" (1♂ LHR); "PERU, Loreto, Estiron. Rio Ampiyacu, XI-13 to XII-9, 1961. B. Malkin leg" and "night sweeping along forest trail" (1♂, 1♀ AMNH); "PERU, Loreto, Headwaters Rio Loreto-Yacu, Yucua Indian Vill. April 21–May 1, 1970. B. Malkin" (1♂ AMNH); "ECUADOR, Pompeya on Napo R. 40 km from Coca, Nape-Pastaza Prov. 1965" and "L. E. Peña Collector" (1♀ AMNH).

Spinalanx corusca, new species

Figs. 12–14

Description. Dorsum without magnification brunneous with disperse, fine glitter of reflected light; dorsum with magnification light castaneous becoming dark castaneous

along anterolateral pronotal borders and on humeri, and luteous on post-frenal portion of scutellum. Dorsal punctation dense, strong, regular, somewhat weaker and denser on head, anterior pronotal margin, humeri, toward scutellar apex and on coria; punctures rufous to dark castaneous verging to fuscous on tylus, vertex of head and basal disk of scutellum; many punctures on basal disk of scutellum confluent and arrayed in short, irregular, transverse lines; interstices on pronotum and basal portion of scutellum rugose; a pair of small, ivory tubercles located at posterior margins of cicatrices near their mesial limits. Jugal margins subparallel for middle third of distance between eyes and apex of head; antecular margins weakly convex; tylus protruding slightly past juga. Pronotal surface weakly depressed around cicatrices, these separated by somewhat elevated triangle with basal angles at the pair of ivory tubercles and apex near anterior pronotal margin; anterolateral pronotal margins concave, each with 6–8 major denticles with ivory apices; humeral angles produced, narrowly round; margin between each humeral angle and hemelytron nearly straight, irregular (Fig. 12). Basal width and length of scutellum equal. Connexiva moderately exposed, serrate; broad, fuscous, lateral borders interrupted on apical 2 or 3 segments. Hemelytra as in *monstrabilis* except costal margins weakly crenulate basally.

Venter luteous, abundantly mottled with rufous. Punctation castaneous to fuscous, rather dense and uniform, but tending to aggregations on base of abdomen; punctures on evaporative areas small, deep, fuscous. Spiracular peritremes dark. Legs light tan, becoming dark brown apically on front and middle tibiae, with numerous, large, dark brown macules on femora and tibiae.

Basal plates shallowly and irregularly depressed along proximal border; posterior margin of each plate notched near posterolateral angle, tuberculate between notch and obtuse posteromesial angle (Fig. 13).

Measurements (mm): Length from apex of head to apex of abdomen 8.67. Length of head from apex to posterior margin of ocelli 2.24, width across eyes 2.32. Length of segments 1–5 of each antennae 0.59, 0.81, 0.99, 1.03, 1.25. Length of segments 2–4 of rostrum 1.84, 0.59, 0.59. Mesial length of pronotum 1.95, width at humeri 5.83. Scutellar length and basal width equal, 3.68; width at distal end of frena 2.31.

Type. Holotype: ♀ labeled “Palmer, Prov., Chapere, Dep. Cochabamba, Bolivia, 1000 M. Franz Steinbach, Coll. 1956”; deposited in U.S. National Museum of Natural History. No paratypes.

Comments. This species differs markedly from the type species in the shape of the basal plates. Apparently it differs also in color, shape of the humeri and proportions of the scutellum.

ACKNOWLEDGMENTS

The specimens upon which this work is based were made available to us through the kindness of Lynn J. Barkley (Los Angeles County Museum of Natural History), Richard C. Froeschner (U.S. National Museum of Natural History) and Randall T. Schuh (American Museum of Natural History). Approved for publication by the Director of the Louisiana Agricultural Experiment Station as manuscript number 87-17-1592.

Received December 9, 1987; accepted March 10, 1988.